

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:
  - a first input terminal receiving a first positive voltage externally in an inspection of said semiconductor device and a normal operation of said semiconductor device;
  - 5       an internal circuit connected to said first input terminal and performing a prescribed operation; and
  - a first protection circuit protecting said internal circuit from static electricity generated at said first input terminal,
  - said first protection circuit including
  - 10       a plurality of first diode elements connected in series between said first input terminal and a line of a reference potential and conducting in response to a voltage of said first input terminal exceeding a second positive voltage higher than said first positive voltage, and
  - a second diode element connected between the line of said reference
  - 15       potential and said first input terminal.
2. The semiconductor device according to claim 1, further comprising:
  - a second input terminal connected to said internal circuit and receiving a first negative voltage externally in the inspection of said
  - 5       semiconductor device and the normal operation of said semiconductor device; and
  - a second protection circuit protecting said internal circuit from static electricity generated at said second input terminal; wherein
  - said second protection circuit includes
  - 10       a plurality of third diode elements connected in series between the line of said reference potential and said second input terminal and conducting in response to a voltage of said second input terminal going lower than a second negative voltage lower than said first negative voltage, and
  - a fourth diode element connected between said second input
  - 15       terminal and the line of said reference potential.

3. The semiconductor device according to claim 2, further comprising:

a third input terminal connected to said internal circuit and receiving externally a voltage of at most a third positive voltage and at least a third negative voltage in the inspection of said semiconductor device and the normal operation of said semiconductor device; and

a third protection circuit protecting said internal circuit from static electricity generated at said third input terminal; wherein

said third protection circuit includes

a plurality of fifth diode elements connected in series between said third input terminal and the line of said reference potential and conducting in response to the voltage of said first input terminal exceeding a fourth positive voltage higher than said third positive voltage, and

a plurality of sixth diode elements connected in series between the line of said reference potential and said third input terminal and conducting in response to a voltage of said third input terminal going lower than a fourth negative voltage lower than said third negative voltage.

4. A semiconductor device comprising:

an input terminal receiving a first negative voltage externally in an inspection of said semiconductor device and a normal operation of said semiconductor device;

an internal circuit connected to said input terminal and performing a prescribed operation; and

a protection circuit protecting said internal circuit from static electricity generated at said input terminal,

said protection circuit including

a plurality of first diode elements connected in series between a line of a reference potential and said input terminal and conducting in response to a voltage of said input terminal going lower than a second negative voltage lower than said first negative voltage, and

a second diode element connected between said input terminal and the line of said reference potential.

5. A semiconductor device comprising:
- an input terminal receiving externally a voltage of at most a first positive voltage and at least a first negative voltage in an inspection of said semiconductor device and a normal operation of said semiconductor device;
  - 5 an internal circuit connected to said input terminal and performing a prescribed operation; and
  - a protection circuit protecting said internal circuit from static electricity generated at said input terminal,
  - said protection circuit including
  - 10 a plurality of first diode elements connected in series between said input terminal and a line of a reference potential and conducting in response to a voltage of said input terminal exceeding a second positive voltage higher than said first positive voltage, and
  - a plurality of second diode elements connected in series between the
  - 15 line of said reference potential and said input terminal and conducting in response to the voltage of said input terminal going lower than a second negative voltage lower than said first negative voltage.